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National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northwest Region
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BIN C15700
Seattle, WA 98115-0070

Refer to:
OSB2000-0052-FEC

August 16, 2001

Mr. Lawrence Evans
Chief, Regulatory Branch
Corps of Engineers, Portland Branch
ATTN: Mary J. Headley
P.O. Box 2946
Portland, OR 97232

Re: Endangered Species Act Section 7 Formal Consultation and Magnuson-Stevens Act
Essential Fish Consultation for the John Day River (Coles) Bridge #7696 Emergency
Repair, Grant County, Oregon (Corps No. 1999-01050)

Dear Mr. Evans:

Enclosed is a biological opinion (Opinion) prepared by the National Marine Fisheries Service (NMFS) pursuant to section 7 of the Endangered Species Act (ESA) on the effects of the proposed John Day River (Coles) Bridge Emergency Repair project in Grant County, Oregon. In this Opinion, NMFS concluded that the proposed action is not likely to jeopardize the continued existence of ESA-listed Middle Columbia River summer steelhead (*Oncorhynchus mykiss*), or destroy or adversely modify designated critical habitat. As required by section 7 of the ESA, NMFS included reasonable and prudent measures with nondiscretionary terms and conditions that NMFS believes are necessary to minimize the impact of incidental take associated with this action.

This Opinion also serves as consultation on Essential Fish Habitat pursuant to section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act and implementing regulations at 50 CFR Part 600.

If you have any questions regarding this letter, please contact Molly Cary of my staff in the Oregon Habitat Branch at 503.231.6892.

Sincerely,

f.1 

Donna Darm
Acting Regional Administrator



cc: Rose Owens - ODOT (w/o attachment)
Greg Apke - ODOT
Chuck Howe - ODOT
Julie Bunnell - ODOT
Art Martin - ODFW

Endangered Species Act - Section 7
Consultation
and
Magnuson-Stevens Act
Essential Fish Consultation

BIOLOGICAL OPINION

John Day River (Coles) Bridge #7696
Emergency Repair
US Highway 26
Grant County

Agency: US Army Corps of Engineers

Consultation Conducted By: National Marine Fisheries Service,
Northwest Region

Date Issued: August 16, 2001

Refer to: OSB2000-0052-FEC

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1. BACKGROUND

1.1 Background

On August 15, 2001, the National Marine Fisheries Service (NMFS) received a request from the US Army Corps of Engineers (COE) for Endangered Species Act (ESA) section 7 formal consultation for an emergency repair to Coles Bridge located on the main stem John Day River on US-26, about 6 miles west of the town of John Day in Grant County, Oregon. Due to the urgency of the project and timing constraints the applicant, Oregon Department of Transportation, sent the Biological Assessment directly to NMFS. The document was received August 14, 2001. Subsequently, a revised BA was received from ODOT on August 15. A permit under Section 404 of the Clean Water Act will be needed to complete the project action and thus serves as the federal nexus for the project. This biological opinion (Opinion) is based on the information presented in the August 15 BA, multiple conference calls, and documents the results of the consultation process.

The COE has determined that the Middle Columbia River (MCR) steelhead (*Oncorhynchus mykiss*) may occur within the project area. The MCR steelhead was listed under the ESA on March 25, 1999 (64 FR 14517). The proposed project is within MCR steelhead critical habitat, which was designated February 16, 2000 (65 FR 7764).

On July 13, 2001 ODOT posted weight restrictions (80,000 pounds) for Coles Bridge due to severe cracking in the concrete beams. Subsequently, on July 18 the degradation was considered severe enough that the need to repair it was declared an emergency by ODOT. As observed in daily inspections the cracks continued to grow, resulting in a further weight restriction to 28,000 pounds, and one-lane of traffic. Detour options were evaluated to accommodate commercial, passenger, and emergency vehicles. Based on the urgency to get the repair done and the length, condition and public safety issues associated with available detour routes, ODOT selected to construct a temporary detour adjacent to the bridge requiring fill to be placed in the river.

The ODOT is proposing to repair the bridge by injecting cracks with epoxy and wrapping the beams with a reinforced polymer fabric. Small amounts of dirt and other material will have to be removed from under the bridge abutments for repair access. A temporary detour will be built adjacent to and downstream of the bridge. The project requires scaffolding to be placed in the active flowing stream, as well as 3 culverts and fill material for the detour road. Fish will be removed from the area prior to construction of the detour. Some excavation of the river bed will be necessary to seat the pipes.

The effects determination was made using the methods described in *Making ESA Determinations of Effect for Individual or Grouped Actions at the Watershed Scale* (NMFS 1996). The COE determined that the proposed action was likely to adversely affect the MCR steelhead.

This Opinion reflects the results of the consultation process. The consultation process involved a site visit and correspondence and communications to obtain additional information and clarify

the BA. As appropriate, modifications to the proposal to reduce impacts to the indicated species were discussed and incorporated into the proposed action. This included the addition of a third culvert in the detour fill and placing all pipes to facilitate fish passage.

The objective of this Opinion is to determine whether the action to repair the Coles Bridge is likely to jeopardize the continued existence of the MCR steelhead or destroy or adversely modify its critical habitat.

1.2 Proposed Action

The existing bridge is a concrete structure that is 183 feet long and 26 feet wide. The bridge is supported by four bents, two of which are located on each side of the flowing channel. Each bent consists of four square concrete pillars, supported on concrete footings that were originally excavated on the bottom of the river. At the bridge, the river is approximately 60 feet wide. The ODOT proposes to repair the existing bridge by erecting scaffolding to act as a work platform and base for containment. The scaffolding legs will be in the active flowing channel. No fill material or excavation of native gravels will occur other than movement of cobbles by hand to provide a level area for the scaffold. The beams to be repaired will be sandblasted, pressure washed, the cracks injected with epoxy, then the fiber reinforced polymer applied around the beams. Grit from the sandblasting and any drips or waste from the epoxy and polymer will be captured and not allowed to enter the waterway or the 2-year floodplain. At both ends of the bridge, above the 2-year floodplain, some excavation by hand will be done to expose the beam. Excavated material will be contained with plastic sheeting during construction. Completion of repair work is anticipated by September 21.

A temporary detour will be built adjacent to and downstream of Coles Bridge. The detour base will be about 82 feet at the widest point and spanning the river, resulting in 2,773 cubic yards of fill. Of that amount approximately 2,100 cubic yards will be placed within the 2-year floodplain. Two 6-foot culverts and one 4-foot culvert will be bedded in the river using river cobble from a commercial source. The six foot pipes are sized to pass the 15 year rainfall event and will be placed to pass fish. The four foot pipe will be placed near the perimeter of the wetted channel to provide upstream fish passage for adult and juvenile salmonids.

No grubbing will be allowed for the detour. However, limbing and cutting trees will be necessary. Cuttings will be taken from the native trees and shrubs and rooted for planting later on site. Geotextile fabric will be placed as a barrier between the ground and the fill material below the 2-year flood elevation. Clean native river cobble (1.5 to 2.5 inch diameter) will be used as fill material to bed the pipes and backfill the detour up to the 2-year elevation. Above this elevation pit run will be used. The river cobble will be wrapped in geotextile to minimize sloughing into the river.

With the exception of the bucket, equipment used to place the culverts will be operated outside the active flowing channel. Prior to the pipes or fill being placed, ODFW will block net, seine

and/or electrofish the work area to assure there are no fish present during construction of the detour.

The detour will be removed by October 1, 2001. The preferred in-water work window is July 15 to August 31 per Oregon Department of Fish and Wildlife (ODFW) guidelines. ODFW District Fish Biologist, Tim Unterwegner, has consented to extend the in-water work window to October 1 (e-mail Tue, 14 Aug, 2001 11:07am). Removal of the fill and the pipes will be done while erosion control methods are in-place. All areas of exposed soils will be reseeded.

The ODOT will pursue mitigation at an upstream site at a 3:1 ratio for disturbance of the streambed and to offset the temporary impacts to the riparian vegetative community. Additionally, areas disturbed by the project will be replanted in the fall of 2001 with the cuttings taken from the trees and shrubs removed prior to the installation of the detour.

1.3 Biological Information and Critical Habitat

The MCR steelhead Evolutionarily Significant Unit (ESU) was listed as threatened under the ESA by the NMFS on March 25, 1999 (64 FR 14517). Biological information concerning the MCR steelhead may be found in Busby et al. (1995, 1996). Critical habitat was designated for the MCR steelhead on February 16, 2000 (65 FR 7764). Critical habitat for MCR steelhead includes the major Columbia River tributaries known to support this ESU including the Deschutes, John Day, Klickitat, Umatilla, Walla Walla, and Yakima Rivers, as well as the Columbia River and estuary. The adjacent riparian zone is also included in the designation. This zone is defined as the area that provides the following functions: Shade, sediment, nutrient or chemical regulation, stream bank stability, input of large woody debris or organic matter, and others.

1.4 Evaluating Proposed Actions

The standards for determining jeopardy are set forth in section 7(a)(2) of the ESA as defined by 50 CFR Part 402 (the consultation regulations). NMFS must determine whether the action is likely to jeopardize the listed species and/or whether the action is likely to destroy or adversely modify critical habitats. This analysis involves the: (1) Definition of the biological requirements and current status of the listed species; and (2) evaluation of the relevance of the environmental baseline to the species' current status.

Subsequently, NMFS evaluates whether the action is likely to jeopardize the listed species by determining if the species can be expected to survive with an adequate potential for recovery. In making this determination, NMFS must consider the estimated level of mortality attributable to: (1) Collective effects of the proposed or continuing action; (2) the environmental baseline; and (3) any cumulative effects. This evaluation must take into account measures for survival and recovery specific to the listed salmonid's life stages that occur beyond the action area. If NMFS finds that the action is likely to jeopardize the listed species, NMFS must identify reasonable and prudent alternatives for the action.

Furthermore, NMFS evaluates if the action, directly or indirectly, is likely to destroy or adversely modify the listed species' designated critical habitat. The NMFS must determine whether habitat modifications appreciably diminish the value of critical habitats for both survival and recovery of the listed species. The NMFS identifies those effects of the action that impair the function of any essential element of critical habitat. The NMFS then considers whether such impairment appreciably diminishes the habitat's value for the species' survival and recovery. If NMFS concludes that the action will destroy or adversely modify critical habitat it must identify any reasonable and prudent alternatives available.

For the proposed action, NMFS' jeopardy analysis considers direct or indirect mortality of fish attributable to the action. NMFS' critical habitat analysis considers the extent to which the proposed action impairs the function of essential elements necessary for juvenile and adult migration, and rearing of the MCR steelhead under the existing environmental baseline.

1.4.1 Biological Requirements

The first step in the methods the NMFS uses for applying the ESA section 7(a)(2) to listed steelhead is to define the species' biological requirements that are most relevant to each consultation. NMFS also considers the current status of the listed species taking into account population size, trends, distribution and genetic diversity. To assess the current status of the listed species, NMFS starts with the determinations made in its decision to list MCR steelhead for ESA protection and also considers new data available that is relevant to the determination.

The relevant biological requirements are those necessary for MCR steelhead to survive and recover to naturally reproducing population levels at which protection under the ESA would become unnecessary. Adequate population levels must safeguard the genetic diversity of the listed stock, enhance their capacity to adapt to various environmental conditions, and allow them to become self-sustaining in the natural environment.

For this consultation, the biological requirements are improved habitat characteristics that function to support successful adult and juvenile migration, and rearing. MCR steelhead spawning does not occur within or adjacent to the project area. The current status of the MCR steelhead, based upon their risk of extinction, has not significantly improved since the species was listed and, in some cases, their status may have worsened. The serious declines in abundance in the John Day River Basin are especially troublesome, because the John Day River has supported the largest populations of naturally spawning summer steelhead in the MCR ESU. The general pattern in abundance for these populations was a low point during the late 1970s followed by an increasing trend leading to peak counts during the late 1980s. In recent years, all populations have declined to lows that are similar to counts observed in the late 1970s.

1.4.2 Environmental Baseline

The current range-wide status of the identified ESU may be found in Busby et al. (1995, 1996). The identified action will occur within the range of MCR steelhead. The defined action area is

the area that is directly and indirectly affected by the action. The direct effects occur at the project site and may extend upstream or downstream based on the potential for impairing fish passage, hydraulics, sediment and pollutant discharge, and the extent of riparian habitat modifications. Indirect effects may occur throughout the watershed, where actions described in this Opinion lead to additional activities, or affect ecological functions, contributing to stream degradation. As such, the action area for the proposed activities includes the immediate portions of the watershed containing the project and those areas upstream and downstream that may reasonably be affected, temporarily or in the long term. For the purposes of this Opinion, the action area is defined as the streambed and riparian habitat of the John Day River extending 50 feet upstream of the area of disturbance, and extending downstream from the area of direct disturbance to the extent a turbidity plume is visible. Other areas of the John Day River watershed are not expected to be directly or indirectly impacted.

On April 13, 2000, NMFS issued a biological opinion (OSB2000-0052) to the Federal Highway Administration (FHWA) which addressed scour repair on Coles Bridge. The repair was made, filling a pool which had formed around one of the piers. Riparian planting was done on all four quadrants of the bridge as mitigation for project impacts. A portion of these plantings will be impacted by the currently proposed project. However, all disturbed riparian plantings will be restored following removal of the temporary detour fill.

The bridge is located across the John Day River, about 6 miles west of John Day in Grant County. Stream flows in this reach peak during spring runoff, and are lowest in August, September, and October. Major impacts in the watershed include grazing, logging, roads, stream channelization, flood, irrigation, mining and agriculture. Riparian habitat degradation is considered the most serious habitat problem in the John Day River Basin. This reach of the river is on the Oregon Department of Environmental Quality's (ODEQ) list of water quality limited segments (Clean Water Act §303(d)) for dissolved oxygen, flow modification, summer temperature, and fecal coliforms. The major habitat constraints for summer steelhead in this area are stream bank degradation, high temperatures, low flow levels from dewatering, and sedimentation. Concern over these issues has led to changes in the grazing strategy which have produced improvements in many riparian areas within the subbasin, primarily resulting from fence enclosures.

Many habitat restoration projects have been planned or are being implemented in the basin. Project objectives are to increase in stream river flows through a combination of irrigation efficiency measures and reducing bank instability, sedimentation, and bed load movement, thereby improving water quality, reducing or eliminating salmonid migration delays from passage impediments, improve riparian condition and implement an annual monitoring program.

In the project area, riparian vegetation is sparse and consists mostly of reed canary grass. The river banks are vegetated with willows on the northwest, southwest, and southeast corners of the bridge, and with rose and Russian elms on the northeast corner. The riparian shrubs provide little shading of the river near the bridge.

Near the Coles Bridge, summer steelhead, spring chinook, and redband trout occupy the main stem John Day River. Steelhead rearing takes place all year, and out migrating smolts pass the bridge in the spring. During the in-water work period of July 15 to August 31, no adult fish are present in the river near the bridge. All out migrating smolts have gone downstream during the period, but rearing juvenile steelhead are present.

Based on the best available information on the current status of MCR steelhead range-wide, the population status, trends, and genetics, and the poor environmental baseline condition within the action area (as described in the BA), NMFS concludes that the biological requirements of the identified ESU area are not currently being met within the action. Numbers of MCR steelhead are substantially below historic numbers. Long-term trends are decreasing. Recent droughts and change in ocean productivity have probably reduced run sizes. The river basin displays degraded habitat conditions resulting from agricultural practices, water diversions, road building, mining, forest management activities, and flooding. Use of the *NMFS Matrix of Pathways and Indicators* (NMFS 1996) identified the following habitat indicators as either at risk or not properly functioning within the action area: Summer water temperatures, turbidity/sediment, chemical contamination/nutrients, large woody debris, pool frequency and quality, off-channel habitat, refugia, streambank condition, and floodplain connectivity, flow/hydrology, and watershed conditions. Actions that do not maintain or restore properly functioning aquatic habitat conditions have the potential to jeopardize the continued existence of MCR steelhead.

1.5 Analysis of Effects

1.5.1 Effects of Proposed Action

The effects determination in this Opinion was made using a method for evaluating current aquatic conditions, the environmental baseline, and predicting effects of actions on them. This process is described in the document, *Making ESA Determinations of Effect for Individual or Grouped Actions at the Watershed Scale* (NMFS 1996). The effects of proposed actions are expressed in terms of the expected effect - restore, maintain, or degrade - on aquatic habitat factors in the project area.

The proposed action has the potential to cause the following impacts to threatened MCR steelhead or designated critical habitat:

1. Work in the active stream will be needed to place scaffolding and build the detour. This has the potential to directly harm any rearing steelhead present.
2. The in stream work has the potential to increase turbidity in the river. Larger juvenile and adult salmon appear to be little affected by ephemerally-high concentrations of suspended sediments that occur during most storms and episodes of snow melt. However, other research demonstrates that feeding and territorial behavior can be disrupted by short-term exposure to turbid water. Localized increases of turbidity during in-water work will likely displace steelhead in the project area and disrupt normal behavior. The effects are expected to be temporary and localized.

3. The placement of culverts and fill material will displace natural riverbed substrate, and will result in bed compaction and localized disturbance. Winter flows and bed-load transfer should recover the project area to pre-treatment condition.
4. Aquatic invertebrates in the substrate will most likely die due to the placement of fill and lack of sunlight. It is anticipated that they will re-colonize these areas after the removal of the detour road.
5. Approximately 100 to 300 hardwood shrubs would be limbed or cut to ground level to facilitate the construction of the detour. Riparian vegetation removal will cause short-term bank instability, and some loss of riparian function (shade, secondary production, nutrient regulation, etc.) over the short term. These shrubs will be rooted for later planting after the detour is removed.
6. Staging activities could potentially result in a spill of hazardous materials. In addition, operation of machinery within and near the river, as well as traffic on the detour, will increase the risk of a spill of hazardous material in the river.

The effects of these activities on MCR steelhead and aquatic habitat factors will be limited by utilizing construction methods and approaches that are included in the biological assessment on page 18 and 19, described as “Conservation Measures”. These include:

1. All in-water work will be conducted during the ODFW in-water work period and approved extension of July 15 to October 1, 2001. Adult steelhead will not be migrating during that time period. Juvenile salmon may be rearing in the project area during the in-water work period. Any juveniles rearing in the project area have the potential to be displaced or killed during the in-water work. Block nets, seining, netting, chasing, or electrofishing to remove fish from the work area prior to construction will minimize the impacts, but there is still a potential for lethal and non-lethal impacts.
2. Fill material to be placed within the 2-year floodplain will consist of commercial native river cobble material. The material will be contained using geotextile materials and facilitate removal.
3. Any equipment that is to come in contact with the flowing channel will be inspected daily for leaks prior to entering the flowing stream. External oil, grease, and mud will be removed from equipment using steam cleaning. The equipment will be inspected by the project inspector prior to each entry into the flowing stream. Untreated wash and rinse water must be adequately treated prior to discharge into the stream.
4. An erosion control plan will be implemented that includes silt fences, sediment filters and routine monitoring. Proper implementation of erosion and sediment controls should be adequate to minimize sediment inputs into the river until vegetation regrowth occurs. All sediment containment devices and erosion control devices will be inspected daily during the construction period to ensure that the devices are properly functioning. Excavated and stored materials will be kept in upland sites with erosion controls properly installed and maintained.
5. Mitigation for streambed disturbance and impacts to riparian vegetation will be at a ratio of 3:1 at an upstream site. Black cottonwood and willow cuttings will be planted within

- the 5-year flood elevation where riparian vegetation has been removed or disturbed from equipment access and stockpiling material.
6. Hazardous materials, including fuel, will not be stored or transferred within 165 feet of the active flowing channel. No staging areas or parking areas will occur within 165 feet of the two-year floodplain. Areas for fuel storage, refueling and servicing will be located at least 200 feet from the flowing stream. This will reduce the likelihood of a spilled toxic substance reaching the river. Spill containment booms will be maintained on-site at all times during construction operations and/or staging of equipment or fueling supplies. Fueling trucks will maintain a spill containment boom at all times.
 7. Excavated and stored materials will be staged in stable upland sites. All applicable erosion control standards will be required during stockpiling of materials.

For the proposed action, the NMFS expects that the effects of the proposed project will tend to maintain each of the habitat elements over the long term, greater than one year. However, in the short term, a temporary increase in sedimentation and turbidity, and disturbance of riparian and in stream habitat is expected. Fish may be killed or temporarily displaced during the in-water work, construction and removal of the detour road and block netting. The potential net effect from the proposed action, including proposed mitigation plantings, is expected to be the maintenance and restoration of functional steelhead habitat conditions.

1.5.2 Effects on Critical Habitat

NMFS designates critical habitat based on physical and biological features that are essential to the listed species. Essential features for designated critical habitat include substrate, water quality, water quantity, water temperature, food, riparian vegetation, access, water velocity, space and safe passage. Critical habitat for MCR steelhead consists of all waterways below naturally impassable barriers including the project area. The adjacent riparian zone is also included in the designation. This zone is defined as the area that provides the following functions: shade, sediment, nutrient or chemical regulation, stream bank stability, and input of large woody debris or organic matter.

The proposed actions will affect critical habitat. In the short term, a temporary increase of sediments and turbidity and disturbance of riparian and in stream habitats are expected. NMFS does not expect that the net effect of this action will diminish the long-term value of the habitat for survival and recovery of MCR steelhead.

1.5.3 Cumulative Effects

Cumulative effects are defined in 50 CFR 402.02 as "those effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation." Other activities within the watershed have the potential to impact fish and habitat within the action area. A wide variety of actions occur within the John Day watershed. Non-federal activities within the watershed are expected to increase with a projected 34 percent increase in human population over the next 25 years in Oregon

(Oregon Department of Administrative Services 1999). Thus, NMFS assumes that future private and State actions will continue within the watershed, but at increasingly higher levels as population density climbs.

ODOT anticipates Coles Bridge will be replaced within 5 to 7 years. The repair described in the subject BA has a life expectancy of 5 to 7 years. It is unknown if this would be a federal or state action. Additional ODOT actions reasonably certain to occur include maintenance actions such as ditch cleaning, bridge and roadway maintenance, culvert cleaning, snow plowing and sanding.

1.6 Conclusion

After reviewing the current status of MCR steelhead, the environmental baseline for the action area, the effects of the proposed Coles Bridge Emergency Repair project and the cumulative effects, it is the NMFS' opinion that this project, as proposed, is not likely to jeopardize the continued existence of MCR steelhead and is not likely to destroy or adversely modify designated critical habitat. NMFS applied its evaluation methodology (NMFS 1996) to the proposed action and found that it would cause minor, short-term adverse degradation of anadromous salmonid habitat due to substrate compaction, sediment impacts, in-water construction, and removal of riparian vegetation. These effects will be mitigated over the long-term through the proposed mitigation planting. Direct mortality of juvenile steelhead may occur during the in-water work period of project activities and attempts to remove fish from the work area.

1.7 Re initiation of Consultation

As provided in 50 CFR 402.16, re initiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained or is authorized by law and if: 1) The amount or extent of taking specified in the Incidental Take Statement is exceeded; 2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent considered in this Opinion; or 4) a new species is listed or critical habitat is designated that may be affected by the action. In instances where the amount or extent of authorized incidental take is exceeded, any operations causing such take must cease pending re initiation of consultation.

2. INCIDENTAL TAKE STATEMENT

Sections 4(d) and 9 of the ESA prohibit any taking (harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct) of listed species without a specific permit or exemption. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, and sheltering. Harass is defined as actions that create the likelihood of injuring listed species to such an extent as to significantly alter normal behavior patterns which include, but are not limited to, breeding, feeding, and sheltering. Incidental take is take of listed animal species that results from, but is not the purpose of, the

Federal agency or the applicant carrying out an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to, and not intended as part of, the agency action is not considered prohibited taking provided that such taking is in compliance with the terms and conditions of this incidental take statement.

An incidental take statement specifies the impact of any incidental taking of endangered or threatened species. It also provides reasonable and prudent measures that are necessary to minimize impacts and sets forth terms and conditions with which the action agency must comply in order to implement the reasonable and prudent measures.

2.1 Amount and Extent of the Take

The NMFS anticipates that the action covered by this Opinion has more than a negligible likelihood of resulting in incidental take of MCR steelhead because of detrimental effects from increased sediment levels (non-lethal) and the potential for direct incidental take during in-water work (lethal and non-lethal). NMFS expects the possibility exists for incidental take of up to 25 summer steelhead from the attempt to remove fish from the work area. Take resulting from the effects of other project actions covered by this Opinion is largely unquantifiable in the short term and not expected to be measurable in the long term. The extent of the take is limited to the action area of the project.

2.2 Reasonable and Prudent Measures

The measures described below are non-discretionary. They must be implemented so that they become binding conditions in order for the exemption in section 7(a)(2) to apply. The COE has the continuing duty to regulate the activities covered in this incidental take statement. If the COE fails to require the ODOT to adhere to the terms and conditions of the incidental take statement through enforceable terms added to the document authorizing this action, or fails to retain the oversight to ensure compliance with these terms and conditions, the protective coverage of section 7(o)(2) may lapse.

The NMFS believes that the following reasonable and prudent measures are necessary and appropriate to minimizing the likelihood of take of listed fish resulting from implementation of this Opinion. These reasonable and prudent measures would also minimize adverse effects to designated critical.

1. To minimize the amount and extent of incidental take from construction activities within the John Day River, measures shall be taken to limit the duration and extent of in-water work, and to time such work when the impacts to fish are minimized.
2. To minimize the amount and extent of incidental take from construction activities in or near the river, effective erosion and pollution control measures shall be developed and implemented throughout the area of disturbance. The measures shall minimize the movement of soils and sediment both into and within the river, and will stabilize bare soil over both the short term and long term.

3. To minimize the amount and extent of take from loss of in stream habitat and to minimize impacts to critical habitat, measures shall be taken to minimize impacts to riparian and in stream habitat, or where impacts are unavoidable, to replace or restore lost riparian and in stream function.
4. To ensure effectiveness of implementation of the reasonable and prudent measures, all erosion control measures shall be monitored and evaluated both during and following construction and meet criteria as described below in the terms and conditions.

2.3 Terms and Conditions

To be exempt from the prohibitions of section 9 of the ESA, the COE must comply with the following terms and conditions, which implement the reasonable and prudent measures described above. These terms and conditions are non-discretionary.

1. In-water work:
 - a. Passage shall be provided for both adult and juvenile forms of all salmonid species throughout the construction period. COE will ensure passage of fishes as per ORS 498.268 and ORS 509.605 (Oregon's fish passage guidance).
 - b. All work within the active channel of all anadromous fish-bearing systems, or in systems which could potentially contribute sediment or toxicants to downstream fish-bearing systems, will be completed within ODFW's in-water work period and approved extension (July 15th to October 1, 2001). Any additional extension of the in-water work period will first require approval by NMFS.
 - c. Alteration or disturbance of stream banks and existing riparian vegetation will be minimized. Where work below the 2-year flood elevation is necessary, a geotextile shall be placed between the ground and the fill to maintain configuration.
 - d. Where fill material is used below the 2-year flood elevation, only clean, non-erodible, native river cobble will be employed. This material will be wrapped in a geotextile to minimize sloughing and to facilitate removal.
 - e. Excavation in the river for scaffolding placement will be done by hand.

Fish salvage:

- f. If the fish salvaging aspect of this project requires the use of seine equipment to capture fish, it must be accomplished as follows:

- i. Before and intermittently during pumping, attempts will be made to seine and release fish from the work isolation area as is prudent to minimize risk of injury.
- ii. Seining will be conducted by, or under the supervision of, a fishery biologist experienced in such efforts. Staff working with the seining operation must have the necessary knowledge, skills, and abilities to ensure the safe handling of all ESA-listed fish.
- iii. ESA-listed fish must be handled with extreme care and kept in water to the maximum extent possible during seining and transfer procedures. The transfer of ESA-listed fish must be conducted using a sanctuary net that holds water during transfer, whenever necessary to prevent the added stress of an out-of-water transfer.
- iv. Seined fish must be released as near as possible to capture sites.
- v. If a dead, injured, or sick listed species specimen is found, initial notification must be made to the National Marine Fisheries Service Law Enforcement Office, in the Vancouver Field Office, 600 Maritime, Suite 130, Vancouver, Washington 98661; phone: 360/418-4246. Care should be taken in handling sick or injured specimens to ensure effective treatment and care. Dead specimens should be handled to preserve biological material in the best possible state for later analysis of cause of death. With the care of sick or injured listed species or preservation of biological materials from a dead animal, the finder has the responsibility to carry out instructions provided by Law Enforcement to ensure that evidence intrinsic to the specimen is not disturbed.
- vi. The COE shall ensure that the transfer of any ESA-listed fish to third parties other than NMFS personnel requires written approval from the NMFS.
- vii. The COE shall ensure that any other Federal, state, and local permits and authorizations necessary for the conduct of the seining activities will be obtained prior to project seining activity.
- viii. The COE must allow the NMFS or its designated representative to accompany field personnel during the seining activity, and allow such representative to inspect the seining records and facilities.
- ix. A description of any seine and release effort will be included in a post project report, including the name and address of the supervisory fish biologist, methods used to isolate the work area and minimize disturbances

to ESA-listed species, stream conditions before and following placement and removal of barriers, the means of fish removal, the number of fish removed by species, the condition of all fish released, and any incidence of observed injury or mortality.

- g. If the fish salvaging aspect of this project requires the use of electrofishing equipment to capture fish, it must be accomplished as follows (NMFS 1998):
- i. Electrofishing may not occur near listed adults in spawning condition or near redds containing eggs.
 - ii. Equipment must be in good working condition. Operators must go through the manufacturer's preseason checks, follow all provisions, and record major maintenance work in a log.
 - iii. A crew leader having at least 100 hours of electrofishing experience in the field using similar equipment must train the crew. The crew leader's experience must be documented and available for confirmation; such documentation may be a logbook. The training must occur before an inexperienced crew begins any electrofishing; it must also be conducted in waters that do not contain listed fish.
 - iv. Measure conductivity and set voltage as follows:

<u>Conductivity (umhos/cm)</u>	<u>Voltage</u>
Less than 100	900 to 1100
100 to 300	500 to 800
Greater than 300	150 to 400
 - v. Direct current (DC) must be used at all times.
 - vi. Each session must begin with pulse width and rate set to the minimum needed to capture fish. These settings should be gradually increased only to the point where fish are immobilized and captured. Start with pulse width of 500us and do not exceed 5 milliseconds. Pulse rate should start at 30Hz and work carefully upwards. *In general*, pulse rate should not exceed 40 Hz, to avoid unnecessary injury to the fish.
 - vii. The zone of potential fish injury is 0.5m from the anode. Care should be taken in shallow waters, undercut banks, or where fish can be concentrated because in such areas the fish are more likely to come into close contact with the anode.

- viii. The monitoring area must be worked systematically, moving the anode continuously in a herringbone pattern through the water. Do not electrofish one area for an extended period.
- ix. Crew members must carefully observe the condition of the sampled fish. Dark bands on the body and longer recovery times are signs of injury or handling stress. When such signs are noted, the settings for the electrofishing unit may need adjusting. Sampling must be terminated if injuries occur or abnormally long recovery times persist.
- x. Whenever possible, a block net must be placed below the area being sampled to capture stunned fish that may drift downstream.
- xi. The electrofishing settings must be recorded in a logbook along with conductivity, temperature, and other variables affecting efficiency. These notes, with observations on fish condition, will improve technique and form the basis for training new operators.

2. Erosion and Pollution Control

- a. An Erosion Control Plan (ECP) will be prepared and implemented. The ECP will outline how and to what specifications various erosion control devices will be installed to meet water quality standards, and will provide a specific inspection protocol and time response. Erosion control measures shall be sufficient to ensure compliance with applicable state and federal water quality standards. The ECP shall be maintained on site and shall be available for review upon request. Erosion Control measures shall include (but not be limited to) the following:
 - i. The contractor or ODOT will have the following on hand: Weed-free straw bales, unsupported silt fence, plastic sheeting, and biobags. The purpose is to address unexpected rain events, or failure of other measures to contain sediment.
 - ii. Temporary plastic sheeting for immediate protection of unvegetated areas (where seeding/mulching are not appropriate), in accordance with ODOT's standard specifications.
 - iii. Erosion control blankets or heavy duty matting (e.g., jute) may be used on steep unstable slopes in conjunction with seeding or prior to seeding.
 - iv. Biobags, weed-free straw bales and loose straw may be used for temporary erosion control. Temporary erosion and sediment controls will be used on all exposed slopes during any hiatus in work on exposed slopes.

- b. Effective erosion control measures shall be in place at all times during the work. Construction within the 5-year floodplain will not begin until all temporary erosion controls (e.g., straw bales, silt fences) are in place, downslope of project activities within the riparian area. Erosion control structures will be maintained throughout the life of the project until permanent measures are in place.
- c. All temporarily-exposed areas will be seeded and mulched. Erosion control seeding and mulching, and placement of erosion control blankets and mats (if applicable) will be completed on all areas of bare soil within 7 days of exposure within 150 feet of waterways, wetlands or other sensitive areas, and in all areas during the wet season (after October 1). All other areas will be stabilized within 14 days of exposure. Efforts will be made to cover exposed areas as soon as possible after exposure.
- d. All erosion control devices will be inspected during construction to ensure that they are working adequately. Condition of erosion control devices will be inspected and recorded daily during the rainy season, weekly during the dry season, monthly on inactive sites. Work crews will be mobilized to make immediate repairs to the erosion controls, or to install erosion controls during working and off-hours. Should a control measure not function effectively, the control measure will be immediately repaired or replaced. Additional erosion controls will be installed as necessary.
- e. If soil erosion and sediment resulting from construction activities is not effectively controlled, the engineer will limit the amount of disturbed area to that which can be adequately controlled.
- f. Sediment will be removed from sediment controls once it has reached 1/3 of the exposed height of the control. Whenever straw bales are used, they will be staked and dug into the ground 12 cm. Catch basins shall be maintained so that no more than 15 cm of sediment depth accumulates within traps or sumps.
- g. Where feasible, sediment-laden water created by construction activity shall be filtered before it leaves the right-of-way or enters an aquatic resource. Silt fences or other detention methods will be installed as close as possible to culvert outlets to reduce the amount of sediment entering aquatic systems.
- h. A supply of erosion control materials (e.g., straw bales and clean straw mulch) will be kept on hand to cover small sites that may become bare and to respond to sediment emergencies.
- i. All equipment that is used for in stream work will be cleaned prior to entering the two-year floodplain. External oil and grease will be removed, along with dirt and

mud. Untreated wash and rinse water will not be discharged into streams and rivers without adequate treatment.

- j. On cut slopes steeper than 1h:2v, a tackified seed mulch will be used so that the seed does not wash away before germination and rooting occurs. In steep locations, a hydro-mulch will be applied at 1.5 times the normal rate.
- k. Material removed during excavation shall only be placed in locations where it cannot enter sensitive aquatic habitat. Conservation of topsoil (removal, storage and reuse) will be employed. Material will be covered so it does not erode in the event of rain or wind.
- l. Measures will be taken to prevent construction debris, including sandblasting and pressure washing waste or product, epoxy, or fiber reinforced polymer, from falling into any aquatic habitat or below the 2-year flood elevation. Any material that falls into a stream during construction operations will be removed in a manner that has a minimum impact on the streambed and water quality.
- m. Project actions will follow all provisions of the Clean Water Act (40 CFR Subchapter D) and DEQ's provisions for maintenance of water quality standards not to be exceeded within the John Day River (OAR Chapter 340, Division 41). Toxic substances shall not be introduced above natural background levels in waters of the state in amounts which may be harmful to aquatic life. Any turbidity caused by this project shall not exceed DEQ water quality standards.
- n. The Contractor or ODOT will develop an adequate, site-specific Spill Prevention and Countermeasure or Pollution Control Plan (PCP), and is responsible for containment and removal of any toxicants released. The Contractor will be monitored by the ODOT Engineer to ensure compliance with this PCP. The PCP shall include the following:
 - i. A site plan and narrative describing the methods of erosion/sediment control to be used to prevent erosion and sediment for operations related to disposal sites, borrow pit operations, haul roads, equipment storage sites, fueling operations and staging areas.
 - ii. Methods for confining and removing and disposing of excess concrete, cement and other mortars and construction/repair waste products. Also identify measures for equipment washout facilities.
 - iii. A spill containment and control plan that includes: Notification procedures; specific containment and clean up measures which will be available on site; proposed methods for disposal of spilled materials; and employee training for spill containment.

- iv. Measures to be used to reduce and recycle hazardous and non-hazardous waste generated from the project, including the following: the types of materials, estimated quantity, storage methods, and disposal methods.
 - v. The person identified as the Erosion and Pollutant Control Manager (EPCM) shall also be responsible for the management of the contractor's PCP.
- o. Areas for fuel storage, refueling and servicing of construction equipment and vehicles will be located at least 165 feet away from the 2-year floodplain. Overnight storage of wheeled vehicles must occur at least 165 feet away from the 2-year floodplain of the John Day River. Overnight storage of non-wheeled vehicles (e.g. crane, track hoe) is allowed within the 2-year floodplain during the in-water work window; however, to minimize the risk of fuel reaching the water, refueling of these vehicles must not occur after 1 pm and there must be a containment device for the vehicle.
 - p. Hazmat booms will be installed in all aquatic systems where:
 - i. Significant in-water work will occur, or where significant work occurs within the 5-year floodplain of the system, or where sediment/toxicant spills are possible.
 - ii. The aquatic system can support a boom setup (i.e. the creek is large enough, low-moderate gradient).
 - q. Hazmat booms will be maintained on-site in locations where there is potential for a toxic spill into aquatic systems. "Diapering" of vehicles to catch any toxicants (oils, greases, brake fluid) will be mandated when the vehicles have any potential to contribute toxic materials into aquatic systems. This applies to the equipment used for work within the two-year floodplain of the John Day River.
 - r. No surface application of nitrogen fertilizer will be used within 50 feet of any aquatic resource.
3. Riparian Habitat Protection Measures
- a. Boundaries of the clearing limits will be flagged by the project inspector. Ground will not be disturbed beyond the flagged boundary.
 - b. Alteration of native vegetation will be minimized. Where possible, native vegetation will be clipped by hand so that roots are left intact. No grubbing. This

will reduce erosion while still allowing room to work. No protection will be made of invasive exotic species (e.g. Himalayan blackberry or reed canary grass).

- c. Native woody vegetation cut from the site will be stored and rooted. The cuttings will be planted within the area impacted by the detour during the fall of 2001 and monitored for 3 years.
- d. About 0.19 acre of disturbance will occur as a result of the temporary detour. Enhancement planting of about 0.57 acre will be done on leased property within the Middle Fork of the John Day River watershed during fall, 2001.

4. Monitoring

- a. Within 30 days of completing the project, the COE will submit a monitoring report to NMFS describing the success meeting their permit conditions. This report will consist of the following information.

- i. Project identification.

- (1) Project name
 - (2) starting and ending dates of work completed for this project; and
 - (3) COE contact person.
 - (4) Monitoring reports shall be submitted to:

National Marine Fisheries Service
Oregon Habitat Branch
Attn: OSB2000-0052
525 NE Oregon Street, Suite 500
Portland, Oregon 97232-2778

- ii. Isolation of in-water work area. A report of any capture and release activity must include:

- (1) The name and address of the supervising fish biologist;
 - (2) methods used to isolate the work area and minimize disturbances to ESA-listed species;
 - (3) stream conditions before and following placement and removal of barriers;
 - (4) the means of fish removal;
 - (5) the number of fish removed by species;
 - (6) the location and condition of all fish released; and
 - (7) any incidence of observed injury or mortality.

- iii. Pollution and erosion control. Copies of pollution and erosion control inspection reports describing any failures experienced with erosion control measures, efforts made to correct them and a description of any accidental spills of hazardous materials.
- iv. Site restoration. Documentation of the following conditions:
 - (1) Finished grade slopes and elevations.
 - (2) Log and rock structure elevations, orientation, and anchoring, if any.
 - (3) Planting composition and density.
 - (4) A plan to inspect and, if necessary, replace failed plants for two years.
- v. A narrative assessment of the project's effects on natural stream function.
- vi. Photographic documentation of environmental conditions at the project site and compensatory mitigation site(s) (if any) before, during and after project completion.
 - (1) Photographs will include general project location views and close-ups showing details of the project area and project, including pre- and post construction.
 - (2) Each photograph will be labeled with the date, time, photo point, project name, the name of the photographer, and a comment describing the photograph's subject.
 - (3) Relevant habitat conditions include characteristics of channels, streambanks, riparian vegetation, flows, water quality, and other visually discernable environmental conditions at the project area, and upstream and downstream of the project.

3. MAGNUSON-STEVENSON ACT

3.1 Background

The objective of the Essential Fish Habitat (EFH) consultation is to determine whether the proposed action may adversely affect designated EFH for relevant species, and to recommend conservation measures to avoid, minimize, or otherwise offset potential adverse effects to EFH resulting from the proposed action.

3.2 Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act (MSA), as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-297), requires the inclusion of EFH descriptions in Federal fishery management plans. In addition, the MSA requires Federal agencies to consult with NMFS on activities that may adversely affect EFH.

‘EFH’ means those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity (MSA §3). For the purpose of interpreting the definition of EFH: ‘Waters’ include aquatic areas and their associated physical, chemical, and biological properties that are used by fish and may include aquatic areas historically used by fish where appropriate; ‘substrate’ includes sediment, hard bottom, structures underlying the waters, and associated biological communities; ‘necessary’ means the habitat required to support a sustainable fishery and the managed species’ contribution to a healthy ecosystem; and “spawning, breeding, feeding, or growth to maturity” covers a species’ full life cycle (50CFR600.110).

Section 305(b) of the MSA (16 U.S.C. 1855(b)) requires that:

- Federal agencies must consult with NMFS on all actions, or proposed actions, authorized, funded, or undertaken by the agency, that may adversely affect EFH;
- NMFS shall provide conservation recommendations for any Federal or State activity that may adversely affect EFH;
- Federal agencies shall within 30 days after receiving conservation recommendations from NMFS provide a detailed response in writing to NMFS regarding the conservation recommendations. The response shall include a description of measures proposed by the agency for avoiding, mitigating, or offsetting the impact of the activity on EFH. In the case of a response that is inconsistent with the conservation recommendations of NMFS, the Federal agency shall explain its reasons for not following the recommendations.

The MSA requires consultation for all actions that may adversely affect EFH, and does not distinguish between actions within EFH and actions outside EFH. Any reasonable attempt to encourage the conservation of EFH must take into account actions that occur outside EFH, such as upstream and upslope activities, that may have an adverse effect on EFH. Therefore, EFH consultation with NMFS is required by Federal agencies undertaking, permitting or funding activities that may adversely affect EFH, regardless of its location.

3.3 Identification of EFH

The Pacific Fisheries Management Council (PFMC) has designated EFH for three species of Pacific salmon: chinook (*Oncorhynchus tshawytscha*); coho (*O. kisutch*); and Puget Sound pink salmon (*O. gorbuscha*)(PFMC 1999). Freshwater EFH for Pacific salmon includes all those streams, lakes, ponds, wetlands, and other water bodies currently, or historically accessible to salmon in Washington, Oregon, Idaho, and California, except areas upstream of certain impassable man-made barriers (as identified by the PFMC), and longstanding, naturally-

impassable barriers (i.e., natural waterfalls in existence for several hundred years). Detailed descriptions and identifications of EFH for salmon are found in Appendix A to Amendment 14 to the Pacific Coast Salmon Plan (PFMC 1999). Assessment of potential adverse effects to these species' EFH from the proposed action is based on this information.

3.4 Proposed Actions

The proposed actions are detailed above in Section 1.2, Proposed Action. The action area is defined as the streambed and riparian habitat of the John Day River extending 50 feet upstream of the area of disturbance, and extending downstream from the area of direct disturbance to the extent of any visible turbidity plume. This area has been designated as EFH for various life stages of chinook salmon.

3.5 Effects of Proposed Action

As described in detail in Section 1.5, Analysis of Effects, the proposed activities may result in detrimental short- and long-term adverse effects to a variety of habitat parameters. These impacts include: Increases in turbidity, disturbance to the beds and bank of the river, removal of riparian vegetation, and the potential for pollutants to enter the water.

3.6 Conclusion

NMFS believes that the proposed action may adversely affect the EFH for chinook salmon.

3.7 EFH Conservation Recommendations

Pursuant to section 305(b)(4)(A) of the Magnuson-Stevens Act, NMFS is required to provide EFH conservation recommendations for any Federal or state agency action that would adversely affect EFH. The conservation measures proposed for the project by the COE and all of the Reasonable and Prudent Measures and the Terms and Conditions contained in Sections 2.2 and 2.3 are applicable to salmon EFH. Therefore, NMFS incorporates each of those measures here as EFH conservation recommendations.

3.8 Statutory Response Requirement

Please note that the Magnuson-Stevens Act (section 305(b)) and 50 CFR 600.920(j) requires the Federal agency to provide a written response to NMFS after receiving EFH conservation recommendations within 30 days of its receipt of this letter. This response must include a description of measures proposed by the agency to avoid, minimize, mitigate or offset the adverse impacts of the activity on EFH. If the response is inconsistent with a conservation recommendation from NMFS, the agency must explain its reasons for not following the recommendation.

3.9 Consultation Renewal

The COE must reinitiate EFH consultation with NMFS if either action is substantially revised or new information becomes available that affects the basis for NMFS' EFH conservation recommendations (50 CFR 600.920).

4. LITERATURE CITED

Section 7(a)(2) of the ESA requires biological opinions to be based on "the best scientific and commercial data available." This section identifies the data used in developing this opinion.

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